

California Regional Water Quality Control Board
North Coast Region

Cleanup and Abatement Order No. 98-100

for

Scotia Pacific Holding Company and
The Pacific Lumber Company

North Fork Elk River

Humboldt County

The California Regional Water Quality Control Board, North Coast Region (hereinafter Regional Water Board), finds that:

1. On September 23, 1994, the California Department of Forestry (CDF) approved timber harvest plan number 1-94-360 HUM for timber harvesting operations on 191 acres in the North Fork Elk River watershed in Humboldt County. The timber harvest plan identifies the timber owners as Scotia Pacific Holding Company (ScoPac) and The Pacific Lumber Company (PALCO). The timberland owners are identified as ScoPac, PALCO and Elk River Timber Company (ERTC). The timber operator was PALCO. ScoPac and PALCO shall hereinafter be referred to as the dischargers. The ERTC has no responsibility or interest in the timber harvesting activities which occurred on THP 1-94-360 HUM except for allowing access for Scopac and PALCO on an appurtenant ridge top road. The timber operations occurred in section 25, T4N, R1W, and in sections 29 and 30, T4N, R1E, HB&M. The timber harvesting consisted of 125 acres of tractor and cable clear-cut and 66 acres of alternative prescription which was applied in the watercourse and lake protection zones. The timber harvest areas are separated into five harvest units identified as Unit A, Unit B, Unit C, Unit D and Unit E as shown on the attached map (which is incorporated herein as Attachment A).
2. On August 25, 1997 and September 9, 1997, Regional Water Board staff attended post-harvest inspections of THP 1-94-360HUM in response to concerns expressed by the California Department of Forestry regarding the degradation of watercourses tributary to the North Fork Elk River. The degradation was due to the discharge of earthen material and organic debris from multiple landslides observed from aerial and on the ground inspections. The Regional Water Board staff observed approximately 1000 lineal feet of Class II stream adjacent to Unit D which was filled with soil and organic debris. The soil and organic debris extended from the Class II watercourse to the North Fork Elk River. The landslide debris originated from a midslope truck road used for harvesting timber. Another Class II watercourse tributary to the North Fork Elk River and adjacent to Unit E was filled with soil and organic debris originating from a failed landing used during timber harvesting. The Regional Water Board staff also observed oversteepened landings with tension cracks in Unit C which threaten to discharge soil and organic debris to tributaries to the North Fork Elk River.

3. On September 23, 1997 the Regional Water Board issued Cleanup and Abatement Order No. 97-115 to the dischargers. A requirement of this order was the submittal of a workplan prepared by a California Registered Professional Engineer or Geologist for cleanup and abatement of soil and organic debris discharged into the North Fork Elk River and its tributaries. The workplan, prepared by Pacific Watershed Associates was received at the Regional Water Board on October 22, 1997. The workplan identified seven locations where approximately 7,160 cubic yards of soil and organic debris were discharged into the North Fork Elk River and its tributaries where cleanup is not feasible or not recommended and would continue to be discharged over the next several years. The Workplan identified eleven locations where soil could be excavated to prevent the discharge of approximately 2728 cubic yards of sediment to the North Fork Elk River and its tributaries.

4. The California Department of Forestry (CDF), Department of Fish and Game (DFG) and the Regional Water Board (WQ) staff observed the discharge of earthen materials and organic debris to the North Fork Elk River and its tributaries from the following timber harvest plans (THPs) on the following dates:

<u>THP</u>	<u>Agency</u>	<u>Location</u>	<u>Date</u>
1-95-097 HUM	WQ	Slide to West Fork Bridges Creek	9/9/97
1-93-068 HUM	DFG	Slide to Bridges Creek	12/12/97
1-94-334 HUM	DFG	Road failure to Bridges Creek	12/12/97
1-96-406 HUM	CDF WQ	Appurtenant road 15 failure to tributaries to Little North Fork Elk River	11/13/98

5. Residents adjacent to the North Fork Elk River who use surface water for domestic water supply and agricultural water supply were interviewed on January 17 and September 15, 1998 by Regional Water Board staff and on November 13 and 14, 1997 by CDF staff. Many of the residents indicated significant changes in water quality since 1993, including tastes and odors offensive to the senses, increased frequencies for the maintenance and replacement of hot water heaters and water treatment facilities, damage to agricultural spray equipment and surface water supply intakes. Residents have also reported significant changes in stream morphology including the filling of pools in the stream channel with sediment resulting in increased flood frequency and duration. Long time residents of the North Fork Elk River reported that the only historic periods of major flooding over the county bridge occurred during the winters of 1955, 1964, 1974 and 1986. More recently, however, they reported that major floods have been observed during the winters of 1995, 1996 and 1997. Residents also reported that minor flooding events at the county bridge and Elk River road occurred infrequently prior to approximately 1992, and have increased in frequency to three or more times per water year (July to June) since approximately 1992.
6. From January 1995 through August, 1998, the CDF issued 51 violations of the California Forest Practice Rules Sections 914.2, 914.6, 916.3, 916.4, 916.7, 917.3, 923.1, 923.4, 923.5, 923.6, 923.8, 1035.3(d) to the dischargers for timber harvest operations within the

North Fork Elk River. These violations of the California Forest Practice Rules resulted in the discharge and/or threatened discharge of soil to the North Fork Elk River and its tributaries and are violations and/or threatened violations of the waste discharge prohibitions contained in the Water Quality Control Plan for the North Coast Region. The timber harvest plans which received violations are displayed on the attached map (Attachment A) and are listed as follows:

1-93-068 HUM	1-95-126 HUM
1-93-501 HUM	1-95-097 HUM
1-94-102 HUM	1-95-185 HUM
1-94-132 HUM	1-95-566 HUM
1-94-334 HUM	1-96-083 HUM
1-94-348 HUM	1-96-406 HUM
1-94-360 HUM	1-96-509 HUM

7. On July 1, 1998, the dischargers submitted a report titled *Sediment Source Investigation and Sediment Reduction Plan for the North Fork Elk River Watershed, Humboldt County, California* (PWA report) in compliance with Cleanup and Abatement Order No. 97-115. The PWA report concludes that “Both road construction and harvesting have been linked to increased sediment production and yield in the North Fork Elk River.” Table 9 of the PWA report identifies the sources of sediment delivery to streams in the North Fork Elk River watershed. As further explained by the author of the report in a telephone conversation with staff, the sources of sediment from the decade of the 1990s are 45,800 yd³ from debris landslides (41%), 32,500 yd³ from road related erosion (29%), 15,600 yd³ from the scour of filled channels (14%), 12,800 yd³ from torrent track scour (11%) and 5000 yd³ from bank erosion (4%). Therefore, the PWA report indicates a relative increase in road related erosion from a watershed average of 13% of the total erosion for the time period of 1954 to 1990 to 29% in the time period from 1990 to 1997. This increase coincides with the time period reported by residents of degrading water quality for domestic and agricultural uses. As the dischargers are responsible for the construction of the roads and/or are the owners of the land, the dischargers have caused or permitted all of the above road-related sediment discharges.

Figure 5 of the PWA report summarizes the number of acres harvested or re-harvested in the North Fork Elk River watershed for six time periods, pre-1954, 1954 to 1966, 1966 to 1974, 1974 to 1987, 1987 to 1994 and 1994 to 1997. Table 5 of the PWA report compares the number and volume of debris landslides from slopes harvested more than 15 years prior to the end of each time period to the number and volume of debris landslides from slopes harvested less than 15 years prior to the end of each time period. A comparison of the landslide volumes for the 1994-1997 period and harvesting history indicates that the volume of debris landslides per acre was at least 13 times greater on areas harvested less than 15 years old when compared to areas harvested greater than 15 years old. The increase in rate of debris landslides due to silvicultural activities on land harvested less than 15 years old for the period of 1994-1997 is estimated to be approximately 16,000 yd³ of the 20,000 yd³ associated with debris landslides. This increase coincides with the time period reported by residents of degrading water quality for domestic and agricultural uses. The increase in debris landslide rate indicates a strong connection between the dischargers’ increased timber harvesting and the increased

discharge of sediment. Although large storm events are a significant factor in causing the discharges, the storm events have a much greater effect on recently harvested areas than on older harvested areas. Therefore, the dischargers' timber harvesting activities have caused or permitted discharges of sediment significantly greater than would be expected in the absence of timber harvesting.

Table 11 of the PWA report identifies sites of future erosion and sediment delivery along 133 miles of roads in the North Fork Elk River watershed. The report estimates a future sediment discharge to the North Fork Elk River and its tributaries of 228,656 yd³ from 661 sites associated with logging roads. The repair of these sites will likely occur in accordance with the "Draft Interim Aquatic Strategy for Timber Harvest and Roads" (Strategy) as attached to the PWA report. The Strategy recommends road storm proofing on high and medium risk sites on at least 50 miles per year on all of dischargers' lands prior to issuance of a incidental take permit under the Endangered Species Act by federal agencies. After issuance of the incidental take permit, Elk River watershed is scheduled for repair of high and medium risk sites during the next 10 years. Therefore, it is likely that many of the sediment delivery sites identified in Table 11 will continue to discharge to the North Fork Elk River and its tributaries for an extended period of time, continuing to adversely affect beneficial uses. Because these sediment delivery sites are road-related, the dischargers are responsible for the discharges and threatened discharges from these sites.

8. On April 23, 1998, the North Coast Regional Water Quality Control adopted Resolution No. 98-45 adopting a schedule for the development of Total Maximum Daily Loads (TMDL) and priority rankings for waterbodies on the Clean Water Act Section 303(d) List. Elk River (which includes the North Fork Elk River) is listed as impaired by excessive sediment and is scheduled for TMDL development by the year 2009.
9. The discharges described above have caused and permitted excess sediment to enter the North Fork Elk River and its tributaries. Excess fine sediment has been shown to detrimentally affect spawning gravel for fish and reducing survival from egg to emergence by reducing intragravel oxygen, gravel permeability and entombing fish fry within gravel interstices. Increased sediment and organic material can also produce tastes and odors offensive to the senses, increase frequencies for the maintenance and replacement of hot water heaters, plug spray nozzles on agricultural equipment and water treatment facilities, and interfere with surface water supply intakes. Increased turbidity due to fine sediment provides a medium to promote bacteriological growths and reduces the effectiveness of water disinfection for domestic water supply. Increased bedload reduces stream pool size and the volume of aquatic habitat for fish and macroinvertebrates and increases the rate of flooding of adjacent lands.
10. Cleanup and Abatement Order No. 97-115 required the dischargers to cleanup and abate the effects of waste earthen material discharged to the North Fork Elk River and its tributaries.

On February 13, 1998, in response to a request from staff that the dischargers propose additional actions to abate the effects of the discharges on domestic water supplies, the dischargers stated that

“We are not aware of any downstream water users that were using water from Elk River that has now been rendered unfit for their prior uses. We have not had any inquiries from water users seeking alternative supplies. If such inquiries arise, we will evaluate the appropriateness and feasibility of our assisting them in developing alternative supplies.”

On March 9, 1998, pursuant to Order 97-115, the Executive Officer directed the dischargers to meet with the downstream water users and provide them with alternative water supplies or take other equivalent measures to restore their domestic and agricultural water use as needed. The dischargers failed to comply with that directive.

This Cleanup and Abatement Order supersedes the above directive contained in the March 9, 1998 letter to meet with the downstream water users and provide them with alternative water supplies or take other equivalent measures to restore their domestic and agricultural water use as needed. The remaining requirements of Order 97-115 and subsequent directives remain in full force and effect.

11. The Regional Water Board adopted the Water Quality Control Plan for the North Coast Region (Basin Plan) on December 9, 1993. The Basin Plan includes beneficial uses, water quality objectives, discharge prohibitions, and action plans.
12. Pursuant to the Basin Plan, including State Water Board Resolution 88-63, the existing and potential beneficial uses of the North Fork Elk River include agricultural water supply, domestic water supply, cold freshwater habitat, water contact recreation, non-contact recreation, wildlife habitat, migration route for anadromous fish, and fish spawning.
13. The Basin Plan’s Action Plan for Logging, Construction, and Associated Activities includes the following prohibitions:
 1. The discharge of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited.
 2. The placing or disposal of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature at locations where such material could pass into any stream or watercourse in the basin in quantities which could be deleterious to fish, wildlife, or other beneficial uses is prohibited.
14. The Basin Plan’s Guidelines For Implementation and Enforcement of Discharge Prohibitions Relating to Logging, Construction and Associated Activities have identified the following water quality objectives, from Section 3 of the Basin Plan as of particular importance in protecting beneficial uses from unreasonable effect due to discharges from logging, construction, or associated activities:

1. Turbidity shall not be increased more than 20 percent above naturally occurring background levels.
2. Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that causes nuisance or adversely affect the beneficial uses.
3. Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
4. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such manner as to cause nuisance or adversely affect beneficial uses.

The Guidelines also state that

“The violation of the following rules, regulations, or provisions may be considered a threatened violation of the waste discharge prohibitions and accordingly the Executive Officer shall take appropriate action as directed by the Enforcement section of these guidelines.

1. A violation of the current rules for forest practices relating to erosion control or water quality protection in any logging or related activity being conducted pursuant to regulations administered by the California Department of Forestry and Fire Protection.”
15. Section 13304(a) of the California Water Code states: "Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board, clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts. Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the Board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In any such suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant."
16. The dischargers have discharged waste into waters of the state in violation of the above prohibitions, and have caused or permitted waste to be discharged or deposited where it is, or probably will be, discharged into unnamed tributaries to the North Fork Elk River and into the North Fork Elk River, and have threatened to cause or permit waste to be discharged into unnamed tributaries to the North Fork Elk River and into North Fork Elk River. Such waste has been and probably will continue to be discharged into the waters of the State, where it has created or threatens to create a condition of pollution or

nuisance. Winter rainfall/runoff threatens to continue the discharge unless and until the waste is cleaned up. The effects of the waste will also continue until the waste is cleaned up by the dischargers or flushed out by natural processes. Until such time, it is necessary to abate the effects of the waste.

17. This enforcement action is being taken for the protection of the environment and to enforce a general standard set forth in the Basin Plan. Therefore, this enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15321, Chapter 3, Title 14, California Code of Regulations.

THEREFORE, IT IS HEREBY ORDERED that, pursuant to California Water Code Sections 13267 and 13304, the dischargers shall abate the effects of their increased sediment discharges to the North Fork Elk River and its tributaries on downstream surface water users. The abatement activities may include any alternatives that provide substantially the same water quality and quantity as was historically (prior to 1993) available for domestic and agricultural uses at approximately the same cost of delivery and treatment of surface waters. The above abatement activities shall restore the historic and existing and potential beneficial uses of the North Fork Elk River and shall continue until the effects of sediment discharges decline to historic levels. The dischargers shall also comply with the following:

1. The dischargers shall survey all landowners downstream of ScoPac/PALCO lands who utilize the North Fork Elk River for domestic water supply and/or agricultural water supply. The survey shall determine which domestic water supplies and/or agricultural water supplies have been adversely effected by increased sediment discharges. No later than October 15, 1998, the discharger shall submit a report on the results of the survey to the Executive Officer for approval which details the adverse effects reported by the water users and the proposed measures to be taken to abate the effects of the discharges and threatened discharges of sediment. The alternative water supplies or other equivalent measures shall be installed to the specifications for compliance with all local and state safe drinking water standards and shall also be subject to review and recommendations by the Humboldt County Environmental Health Department.
2. The dischargers shall abate the effects of the discharges and threatened discharges of sediment by providing the adversely affected downstream surface water users with alternative water supplies or take other equivalent measures to restore their domestic and agricultural water use as described above by November 15, 1998. A report detailing the dischargers' efforts to provide downstream water users with an alternate source of water shall be submitted to the Regional Water Board by December 1, 1998.
3. If, for any reason, the discharger is unable to perform any activity or submit any document in compliance with the schedule set forth herein or in compliance with any work schedule submitted pursuant to this Order and concurred in by the Executive Officer, the discharger may request, in writing, an extension of the time specified. The extension request must be submitted five days in advance of the

due date and shall include justification for this delay including a description of the good faith efforts performed to achieve compliance with the due date. The extension request shall also include a proposed time schedule with new performance dates for the due date in question and all dependent dates. An extension may be granted for good cause, in which case this Order will be revised accordingly.

Ordered by _____

Lee Michlin
Executive Officer

September 22, 1998